CHAPTER 3
SECTION 15.16

# STEREOTACTIC RADIOFREQUENCY PALLIDOTOMY WITH MICROELECTRODE MAPPING FOR TREATMENT OF PARKINSON'S DISEASE

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## I. PROCEDURE CODES

61720

## II. DESCRIPTION

A. Pallidotomy (a new procedure) is a neurosurgical procedure involving a surgical lesion of the globus pallidus, which lies in the basal ganglia portion of the brain, with the aim of controlling one or more of the major symptoms of parkinsonism, including tremor, rigidity, and hypokinesia, in those patients who have not responded adequately to medical treatment.

B. The patient is taken to radiology where the surgical target within the pallidum is defined by a CT (see Chapter 4, Section 2.2) and/or MRI (see Chapter 4, Section 2.1) scan carried out with a special stereotactic frame attached to the head. Once the appropriate target coordinates have been selected on a computer work station, the patient is taken back to the operating room for the surgical procedure itself.

C. A small patch of hair is shaved in the frontal region and the surgery is then carried out under intravenous sedation. A 3 cm skin incision is made in the scalp after infiltration with local anesthesia and a burr hole is drilled through the skull. A 1.8 mm insulated stimulating electrode is then introduced under impenance monitoring into the postero-ventro-lateral globus pallidus.

D. The target area is stimulated with very small electrical impulses which may give rise to a variety of different reactions. The purpose of the stimulation, is to make sure that the problem lies in the correct area of the pallidum. With electrical stimulation, tremor and rigidity can be reduced almost immediately in the operating room and this confirms accurate placement of the electrode tip.

## III. POLICY

A. Pallidotomy for Parkinson's disease may be cost-shared when the following criteria are met:

1. The patient has a diagnosis of idiopathic Parkinson's disease;

2. The patient's disease was previously responsive to levodopa therapy but is now medically intractable;

3. The patient has levodopa-induced dyskinesia or disease characterized particularly by severe bradykinesia, rigidity, tremor, or dystonia, or by marked "on-off" fluctuations;

4. The patient does not have evidence of dementia; and

5. The patient is informed of the risks and benefits of surgery, including the specific mortality and morbidity experience of the center at which the procedure is to be performed.

*NOTE: Coagulopathy, use of antiplatelet agents, and uncontrolled hypertension, particularly intraoperative hypertension, are contraindictions to pallidotomy, since they increase the risk of intraoperative hemorrhage.*

## IV. POLICY CONSIDERATIONS

Prior to surgery, all patients should have an adequate trial of medical therapy, usually with multiple agents.

## V. EXCLUSIONS

A. Patients exhibiting signs of early dementia.

B. Elderly patients with very advanced disease, autonomic symptoms, severe speech impairment.

C. Patients with "Parkinson's Plus" syndrome which mimic true Parkinson's disease, e.g., postural instability, freezing, poor speech volume and swallowing difficulties.

## VI. EFFECTIVE DATE

November 1, 1996.

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